Chapter 3

Animal Husbandry

23 ANIMAL HUSBANDRY IN Kerala is poorly developed. It stands in sharp contrast to the well-developed agricultural sector. With the exception of poultry, low livestock productivity marks all aspects of animal husbandry. The milk yield in the State is among the lowest in the country. The total production of milk in Kerala in 1956 has been estimated at 1.82 lakh tons,[1] which works out to a per capita production of 1.3 ozs. as against the minimum of 10 ozs. per capita recommended by the Nutritional Advisory Committee of the Indian Council of Medical Research. This is also true of yield of meat from sheep and goat. Consequently, the contribution of animal husbandry to the State income is comparatively low. During 1957-58 the net contribution of livestock to State income was Rs. 12.2 crores, that is, only 3.3 per cent of the State income while for all-India it was about 8 per cent.

Livestock Population

3.2 According to the 1956 Census of livestock, Kerala had a total livestock population of 4,168,000. This consisted of 2,510,000 cattle; 4,88,000 buffaloes; 97,820 sheep; 113,711 pigs; 956,000 goats, fowls and ducks. The number of cows and she-buffaloes in milk per thousand of human population was very low at 30, while the same was as high as 148 in Madhya Pradesh, 123 in Punjab, 150 in Rajasthan (all-India 80). Other major heads of livestock in the same year were sheep (97,820) and pigs (113,711).

3.3 In 1956 there were 838,000 working cattle in the State (Table 20). The significant fact about this is the high proportion of buffaloes to the total working cattle. The buffaloes constituted about one-third of the draught animals. The corresponding all-India proportion in the same year was only 9 per cent. Buffaloes are popular in Kerala as draught animals, because of their superior draught capacity and greater suitability for the puddled type of cultivation. This has an important bearing on the formulation of the future breeding policy.

3.4 Between the Census of 1951 and 1956 the livestock population rose by over 17 per cent in the State as against only 4.8 per cent for the entire country. There has been an all round increase under all the major heads except pigs (—3.6%) and sheep (—77%). A large increase in the livestock and poultry population may be partly due to a higher level of reporting in the Census of 1956 over the previous Census.

[1] *Indian Livestock Statistics*, 1953-54 to 1955-56, Ministry of Food and Agriculture, Government of India.

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

But much of this increase is the consequence of a greater diversification in agricultural activities with a view to reducing unemployment and under-employment among family labour and raising the family income. Poultry-keeping has, of late, become very popular with the rural families and it is unusual to find families in the rural areas which do not rear at least a few laying birds. Kerala produced 137 million eggs (hen eggs—114 million; duck eggs—23 million) in 1951, and ranked fifth among the States in egg production. Production of eggs is now much higher and may be around 200 million. Kerala is also the biggest exporter of eggs. These are sent as far as Punjab in the north, Calcutta in the east and Bombay in the west and even to foreign countries, mainly Ceylon.

Low Productivity of Livestock

3.5 On an average a cow yields 330 lbs. of milk per year, a buffalo 619 lbs. and a goat 40 lbs. These yield rates compare very unfavourably with those for other parts of India (Table 16).* The low productivity of animals is partly due to the poor inherent breed characteristics and partly due to the conditions under which they are reared. The cattle found in Kerala are all of a non-descript type. They are small in size and build. They are stunted in growth. Buffalo in Kerala weighs about half of its counterpart in U.P. or Punjab. The same is true of other livestock too.

3.6 The livestock, especially the bovines, are reared under unwholesome conditions. They are under-fed. The bulk of the ration consists of roughages, mostly rice straw, and is grossly deficient in proteins and other protective properties. The livestock feed available in Kerala is also highly deficient in some of the important bone-building minerals such as calcium and phosphates. This is a direct consequence of a high rainfall which has leached off most of these minerals from the root zones of soils. In the absence of adequate phosphatic and calcium soil amendments, the crops grown in such soils are poor in these minerals. Lack of minerals has a telling effect on the health, build and general condition of the livestock of Kerala. The small size and build are important causes responsible for their low milk yield and poor work output.

3.7 Nutritional deficiencies lead to a number of serious consequences. Poor health results in low vitality and resistance to diseases as well as a low rate of nutritional utilization from feeds. All these factors are responsible for a low level of efficiency and other hazards such as a high rate of mortality and a low rate of fertility. However, realizing the reasons for low productivity, many enlightened farmers have taken to scientific rearing of livestock and have started adding concentrates, such as waste grains, oil cakes and mineral mixtures to the cattle feed. Credit for this goes to the State's Animal Husbandry Department which has been making special efforts to educate the peasantry on the need for adding mineral mixtures to the livestock feed. The Department has been distributing mineral mixtures to farmers at subsidized rates in order to popularise them.

3.8 In view of the very poor quality of livestock in the State there is an urgent need for developing animal husbandry in Kerala. Although animal husbandry

* [Table 16, appearing on p. 282 of the text, has not been processed -- Analyst]

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programmes do not create any significant increase in direct employment opportunities, they do help in reducing the degree of unemployment situation within the family. Moreover, some of the animal husbandry activities such as piggery, poultry-rearing, and bee-keeping need little investment to start with and are quick to yield returns.

3.9 Development of animal husbandry on commercial lines by individual rural families may not be possible without adequate State action. Aid should be given for implementing measures of improvement with a view to increasing the efficiency and productivity of the livestock. The aid could be given int he form of easy loans, development of marketing and processing facilities, sale of feed and fodder at reasonable prices, etc. These are discussed in the subsequent paragraphs separately for cattle and other livestock.

CATTLE DEVELOPMENT

3.10 The output of milk from cattle and buffaloes as well as draught capacity can be improved through a scientific breeding programme and the prevention and control of diseases. As stated previously, cattle found in the State are of non-descript types. Unless they are imparted with high productivity genes, any amount of improvement in feeding and rearing will not be of much use beyond a particular stage. It is, therefore, necessary to concentrate on improving the breed of cattle and buffaloes. There are two ways of tackling this problem: (*i*) selective breeding and (*ii*) mass upgrading.

3.11 The former is not feasible, as there may not be enough cattle to start with if rigid norms are employed for selection. There will also be the problem of finding suitable means of disposal of the useless cattle. The practical solution under these circumstances would be to resort to a scheme of mass upgrading according to which the local bulls are to be replaced with bulls of some outside breed, suited to local needs and conditions. To be really effective, the upgrading programme should be made to cover the entire State and should stretch over a span of at least four decades. During this period, no bulls, other than the approved ones, should be allowed to sire.

3.12 The value of the upgrading programme was realized in Kerala a few decades ago. The scheme was introduced on a large scale during the First Plan by starting five Key Village Schemes. The number was raised to 14 in the Second Plan. It is estimated that by 1965-66, it would be possible to cover about a quarter of the eligible milch cattle under the Key Village and Artificial Insemination Schemes. But even though the programme is well conceived and implemented, the NCAER team was left with the impression that the scheme had not made any significant impact in the improvement of cattle and buffalo breeds in the State. Apart from the inadequate coverage of the programme, non-elimination of the local or scrub bulls is a serious problem. For success and effectiveness of the upgrading programme, it is, therefore, necessary, first, to implement the programme intensively all over the State and secondly, competition from the local bulls should also be eliminated by compulsorily castrating all the males before they reach the fourth year of their life. These suggestions may be implemented during the Third Plan.

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433 23 234 sector. The dairy farms may also take up the manufacture of high value items such as creamery products and *cheddar* cheese.

Processing and Marketing of Poultry Products

*433 235 474 3.33 Proper disposal of poultry products is also a pressing need. At present there are a number of private as well as cooperative organizations in the Travancore-Cochin area for collecting and marketing poultry products. Some of them have even inter-State connections. These organizations have rendered satisfactory service to the poultry industry in Kerala. Credit goes to them for having developed export demand for poultry products of the State. All these organizations, however, are faced with serious limitations to further expansion and more efficient working. Their main problem is inadequate working capital. The other difficulties are: (*i*) lack of cold storage facilities, (*ii*) inadequate availability of transport aids and containers for safe transit, and (*iii*) lack of technical guidance. The State should take steps to remove these difficulties. It is suggested that the State should encourage municipalities to construct cold storage godowns. This would benefit not only the poultry industry, but also other activities such as horticulture, meat packing and fisheries. The other needs could be largely looked after by the Development Blocks. It is also suggested that the poultry cooperatives should be asked to grade eggs before marketing them.

*433 235 439 3.34 It may not be possible to find market either inside or outside the State for all the marketable surplus in poultry products in the future. This fear is justified in view of the fact that significant development in poultry industry has taken place in some of the egg-importing States such as West Bengal, Madras, Punjab and Bombay under the Second Plan. It may, therefore, be expected that the production of eggs and other items in these States would increase considerably by the end of the Third Plan. Such a development would hit Kerala's exports adversely. In order to guard against such consequences, it is desirable that alternative means of disposal of eggs and poultry meat are planned now. The best method would be to set up a combined egg powder-cum-meat packing plant in a convenient location somewhere in the Travancore-Cochin area. The in take of the plant may be of the order of 30,000 eggs and 500 to 1,000 birds per day. The birds may be processed for preservation and packed in polyethelene bags in convenient numbers. A product like this is bound to be popular all over the country. The plant would need an investment of Rs. 3 lakhs.

*433 23 452 3.35 Animal husbandry needs State support and help in other ways too. Loans from the State Government to both processers and cooperatives would be of a great help. The average farmer is at present unable to take to livestock-keeping as a subsidiary occupation on account of lack of funds for investment as well as for working capital. Normal farming agencies like banks and cooperatives do not serve them because of their non-credit worthiness and the uncertain nature of livestock business. Seeking the help of local money-lenders would be too expensive for these ventures. Only the State can solve the problem of rural credit in a situation of this type by making available larger *takavi* funds, arranging for loans through banks and cooperatives, by agreeing to share the risks, etc.

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

INVESTMENT ESTIMATES

3.36 It is not possible to give the exact extent of investment that would be needed to implement the measures suggested here as the major part of investment would be in the nature of improvement in the rearing conditions, erection of broods, purchase of livestock, poultry, etc., which have to be undertaken by individual farmers themselves. The public sector component of total investment for the programmes suggested in the above pages comes to Rs. 2.7 crores. The major schemes for improvement of cattle, etc., and the likely public sector investment on these is given below:

	Rs. lakhs
Breeding programme	6.75
Veterinary aid	77.30
Poultry Extension Centres	35.75
Dairies (milk-processing units)	145.00
Egg powder factory	3.00
TOTAL	267.81

3.37 Assuming roughly that the proportion between private and public sector investment in the sphere of animal husbandry is the same as in the agricultural sector, private investment by farmers for improvement of livestock and poultry may be taken to be Rs. 3.5 crores. On this basis total investment, therefore, would add up to Rs. 6 crores during the coming decade.

3.38 As a result of the above schemes, it is estimated that milk production will go up by approximately 50 per cent while egg production may even double its present output of milk may, therefore, be expected to be 2·75 lakh tons and that of eggs 400 million by 1970-71. NCAER's population projections estimate the population of Kerala in 1970-71 to be 20.12 million. Consumption of milk by the end of the Fourth Plan is, therefore, likely to be about 2 ozs. per head, if the above measures are effectively implemented.

[Text continues on p. 67]

TABLE 17

GROSS VALUE OF OUTPUT FROM ANIMAL HUSBANDRY IN KERALA

(Rs. lakhs)

Item	1955-56	1956-57	1957-58
Milk consumed as such	531	540	561
Other milk products	593	604	608
Beef	56	58	62
Buffalo flesh	18	19	20
Mutton	93	97	98
Hides and Skins	29	30	31
Bones and Horns	6	7	7
Eggs	84	121	136
Poultry	72	78	84
Dung	321	381	394
Increment in stock	96	113	116
Miscellaneous	4	4	3
GROSS VALUE OF OUTPUT	1903	2052	2120

SOURCE: *Regional Income of Kerala* (At current prices) 1955-56 to 1957-58: Government of Kerala (1960).

TABLE 18

LIVESTOCK POPULATION OF KERALA—MAJOR CATEGORIES, 1951 AND 1956

Category	Total		Percentage of increase (+) or decrease (—) in 1956 over 1951
	1951	1956	
Cattle	2,151,522	2,510,376	+ 16.7
Buffaloes	444,368	487,553	+ 9.7
Sheep	423,513	97,820	— 76.9
Goats	423,345	955,570	+ 125.7
Horses and Ponies	518	1,690	+ 226.2
Mules	14	2	— 85.7
Donkeys	689	1,415	+ 105.2
Pigs	117,932	113,711	— 3.6
TOTAL LIVESTOCK	3,561,901	4,168,237	+ 17.1
Fowls	3,854,519	6,462,799	+ 67.6
Ducks	263,147	322,065	+ 26.2
Others	..	161	..
TOTAL POULTRY	4,117,666	6,785,045	+ 64.1

SOURCE: *Statistical Outline of Kerala State, 1960.*

[Pp. 280-282 not Processed]